NOVA SCOTIA
Health
Research
FOUNDATION

ANALYSIS OF RESPONSES TO

A CRITICAL LOOK

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EXECUTIVE SUMMARY

In January 2000, the Nova Scotia Health Research Foundation (NSHRF) was established – the first government-funded health research organization in the province. With a legislated mandate to assist, collaborate with and fund individuals and organizations conducting health research throughout the province, NSHRF has already made significant progress in achieving this mandate.

The Foundation commissioned a report, *A Critical Look at Health Research in Nova Scotia*, to provide its Board of Directors with a broad overview of health research in the province as well as to stimulate reflection, discussion and debate about strategies for achieving the objectives of the Foundation. NSHRF then distributed the document widely in both "hard copy" and by website, and specifically invited 83 individuals and organizations from the local research community, national funding agencies and provincial government departments to review and comment on the document and provide further insight into the current state of health-related research in Nova Scotia. Twenty-nine responses were received providing constructive criticism and helpful suggestions.

Ranging from brief and straightforward to detailed and provocative, these responses painted a more detailed and comprehensive picture of the current health research landscape in the province. They addressed many additional issues and concerns facing the research, academic, health and professional communities, and provided greater awareness about how partnerships could be forged to reinforce Nova Scotia's research strengths. However, opinion was sharply divided on two main issues – the focus of NSHRF support and the requisite role of government in research-related activities.

This document is a summary of the main issues raised by respondents to the original discussion document. For obvious reasons, it does not provide full details about every response. Nevertheless, the complete text of each response will be reviewed and analyzed in detail by the NSHRF Board as the Foundation develops its policies and charts its future course.

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REPORT
October 25, 2001

1. INTRODUCTION

Research communities across the country are facing tremendous changes, challenges and opportunities. After years of tight budgets and tough cutbacks, the federal government is now almost doubling its investment in health sciences research and has committed to significant annual funding increases.

In 1997, the Canadian Health Services Research Foundation(CHSRF) was established with an initial endowment of $66.5 million. CHSRF was the product of two key players with converging intentions: the Medical Research Council, which wanted more applied research funding for health services research delivery, and the federal government, which wanted more use of health services research evidence to inform health-systems decisions. In 1999, the Foundation received a further $60 million, which included a 10-year, $25-million research fund to increase research on Canadian nursing issues.

In June 2000, the Canadian Institutes for Health Research (CIHR), a family of virtual institutes organizing and funding health research, brought together a number of national funding agencies. CIHR is working to coordinate, integrate and align the health and research agendas in Canada. It has been integrated with the former Medical Research Council, signifying a very deliberate decision to embark on a new research thrust spanning a much broader spectrum of disciplines. This move is intended to build up research in previously underdeveloped areas such as nursing, the social sciences and humanities, health services and policy, health economics, and biostatistics. CIHR's base budget for 2001-2002 is $477 million.

The Social Sciences and Health Research Council (SSHRC) is a long-established research organization that funds researchers, scholars and universities through its competitive grant programs. Its budget in fiscal 2001 is $156.5 million. The Canadian government is also infusing $900 million into research over the next five years to create new research chairs in universities across the country. These chairs will be distributed according to each university's history of obtaining national research funding.

Against this backdrop, the province of Nova Scotia established the Nova Scotia Health Research Foundation (NSHRF) by an act of the legislature in late 1998. Little more than a year later, the Nova Scotia Health Research Foundation Act was proclaimed and the province committed $5 million annually in funding to the Foundation.

2. NOVA SCOTIA HEALTH RESEARCH FOUNDATION

The first government-funded health research organization in Nova Scotia, the Nova Scotia Health Research Foundation strives to foster an environment in which collaboration, integration and innovation thrive. NSHRF's goals are to assist, collaborate with and fund individuals and organizations in the province conducting health research in the province in the broadest sense.

2.1 Legislated mandate

NSHRF's mandate specifies that the Foundation shall:

- Identify health-research priorities through consultation and communication with government, health boards, organizations, institutions and individuals;
- Allocate funds to support the province's health-research priorities and capacity development, including the retention of skilled personnel;
- Establish a peer-review system including, where appropriate, peers who reside outside the province to ensure that scientific and ethical standards are maintained in awarding all grants;
- Communicate research findings;
- Establish a forum for interaction between health care research and those who apply the findings; and
- Seek both private and public money for the working of the Foundation.

2.2 Eligible research

The specific categories of research eligible for funding under NSHRF are:

- *health-services research* - research into the efficiency and effectiveness of the management, organization and delivery of health services

- *health-outcome research* - research into changes in the health status of populations due to the implementation of health programs and services

- *health public-policy research* - research into the impact of social factors, allocation of resources, legal and ethical issues and the administration, organization and financing of health care

- *medical research* - includes basic scientific and biomedical research as well as clinical and epidemiological investigations

2.3 Objectives

An Interim Board of Directors, which guided the Foundation until the appointment of a permanent Board in the fall of 2000, specified six primary objectives for the new organization. These were to:

1. Build and sustain a full range of health research in Nova Scotia
2. Foster health research as a foundation of health care, health education, and health policy in Nova Scotia
3. Create and maintain a vibrant environment for research in the training of health professionals and health research investigators
4. Foster partnerships in health research among disciplines and across institutions
5. Support health research that has the potential to increase economic activity in Nova Scotia
6. Support research that addresses health issues of importance to Nova Scotians

2.4 Progress and achievements

Although still in its infancy, NSHRF has already made significant progress toward achieving its legislated mandate. The Foundation has held two grant competitions disbursing $4.3 million in research funds each year.

Some of the Foundation's other achievements to date include:

- Establishing a Matching Grants Program.
- Creating a series of workshops to be held annually responsive to the needs of the research community.
- Designing a comprehensive *Communications Plan* to promote partnerships, encourage dialogue and generate greater awareness about NSHRF and the health research community in Nova Scotia.
- Developing and implementing a Capacity Building Program that provides support to projects in the early stages of development and assists students and researchers starting out in their careers.

- Preparing a discussion document *A Critical Look at Health Research in Nova Scotia*, designed to provide an overview of the health research landscape in the province.

- Commissioning a broad-based report that discusses the nature and type of provincial support available for health research across Canada. The report is believed to be the first of its kind in the country.

- Collaborating with colleagues throughout Atlantic Canada to explore issues of mutual concern and opportunities for partnerships and joint initiatives.

- Co-sponsoring Nova Scotia's first CHSRF/CIHR Chair in Pharmacy. Over the next decade, the research chair will serve as a mentor, train graduate students and conduct health research over the next decade

Currently, NSHRF is engaging in a series of consultative activities including:

- a university tour to make presentations to students, faculty and other interested participants and hold focus group discussions

- distributing satisfaction and feedback surveys

- compiling information to assist the Foundation's Board with policy development

- a commissioned public survey

3. A CRITICAL LOOK AT HEALTH RESEARCH IN NOVA SCOTIA

Over the past year, many planning activities have occurred around health research priorities across the country - pieces of a larger jigsaw designed to provide a picture of Canadian health research. At the national level, the deputy ministers of health commissioned the report *"Health Services Research Priorities"*, through the F/P/T Advisory Committee on Health Services' Research Working Group. CHSRF also published its summary report *"Listening for Direction: A national consultation on health services issues"*. This document represented the findings of a nationwide consultation effort involving 5 major national agencies and organizations.

In September 2000, the Nova Scotia Health Research Foundation commissioned a report intended to provide its Board of Directors with a broad overview of health research in Nova Scotia. ***"A Critical Look at Health Research in Nova Scotia"*** (January 24th 2001) sought to identify the strengths and weaknesses in the province's health research landscape. The report drew on available information, 118

research proposals reviewed by NSHRF in 2000 and 13 key informant interviews. The informants were selected through a 3-stage process which began with a lengthy list of nominations provided by the Merit Review Committee members and NSHRF staff, and culminated in a small group of individuals chosen to provide maximum diversity of representation.

Organized according to the six (6) objectives of the NSHRF, the document provided an initial glimpse of many of the issues and challenges facing the health research community. The report also offered a number of indicators which could be used to track future progress - or lack thereof! - towards these objectives.

One consistent message from those interviewed for the document was for the Foundation to "**facilitate a process to develop a strategic plan for health research in the province.**" ***A Critical Look*** also identified the following seven (7) **key issues** and three **principal recommendations** for health research.

Key Issues Summary (from *A Critical Look*)

- The province lacks a critical mass of expertise in non-medical health research, health services, policy, and social sciences research.
- There are few opportunities for interaction between health researchers and decision-makers in Nova Scotia. Most health research is still carried out without decision-maker involvement.
- Decision-makers rarely take advantage of the expertise in the health-research community for informing policy decisions.
- Nova Scotia is now recognized as an ideal "laboratory" for health research, but this advantage is not fully exploited.
- The health-research environment is less than vibrant due to little critical mass, difficulty attracting and retaining researchers, limited availability of start-up funding, and little intersectoral collaboration.
- Health research is described as fragmented with little communication and collaboration, and noticeable hostility between sectors and individuals.
- Researchers are not naturally blessed with entrepreneurial skills. They need encouragement and assistance to form large funding partnerships and fully exploit the economic potential of their research.

The three principal recommendations (from *A Critical Look)*

- Facilitate a collaborative planning process
- Build capacity for research
- Fund only the highest-quality research

4. RESPONSE TO *A CRITICAL LOOK*

As part of its public commitment to transparency in process and decision-making, NSHRF designed *A Critical Look* to stimulate reflection, discussion and debate from the research community about ways to achieve the objectives of the Foundation. Using the paper as a springboard for debate, NSHRF invited 83 key individuals and organizations from the local research community, national research funding agencies, and regional and provincial government departments to review the document, provide additional information and insights, respond to the issues discussed and recommend future strategic directions for NSHRF.

NSHRF received 29 responses from this consultation process, eliciting valuable insights, constructive criticism and helpful suggestions for the future strategic direction of the organization. (Please refer to Appendix 1 for a list of respondents to the document.) The responses ranged from brief and straightforward to detailed and provocative.

This summary of the feedback to *A Critical Look* is designed to provide more information about health research activities in the province and highlight additional key issues facing the research community as identified by the respondents. The responses are organized first according to the strengths of *A Critical Look,* followed by an overview of the respondents' main issues and concerns. The comments conclude with suggestions for NSHRF's consideration.

4.1 Strengths

Establishment of the Nova Scotia Health Research Foundation was seen as a landmark in the Nova Scotia research environment. Many respondents praised NSHRF for the positive influence that it has had locally with researchers, who particularly appreciate the Foundation's leadership role in supporting research excellence. They also commended NSHRF for undertaking preparation of *A Critical Look*.

The document was generally considered to be thoughtfully written, providing a preliminary analysis of health research in Nova Scotia and endeavouring to achieve a balance between highlighting opportunities and assessing the current situation. It was seen to be "a good start" in initiating a discussion about the future role of NSHRF and for launching the development of a clear strategic plan to improve health research. The report drew attention to some of the fragmentation and under-development that existed in certain areas of health research, such as the social sciences, nursing and health-services sectors.

The picture sketched out is not unique to Nova Scotia. One respondent in New Brunswick, for example, felt that the report "told the story of health research not only in Nova Scotia but also in New Brunswick...and the Atlantic Region".

4.2 Issues and Concerns

Virtually all respondents agreed that the report provided only a partial glimpse of the health-research scene. The following summary of respondents' comments has, therefore, been organized under the broad headings of *methodological comments; research-related issues; university-related challenges; Faculty of Medicine issues; partnerships; role of NSHRF.*

4.2.1 Methodological Issues

Some respondents wanted:

- more details about the NSHRF's budget, as well as the number and nature of the applications for funding the Foundation has received.

- additional details about the three recommended directions for NSHRF, in particular, identifying how the Foundation could address each approach e.g. "Should collaborative planning proceed en masse as a single exercise or should it start with building blocks and single gatherings?" "Should building research capacity focus on specifically targeted areas?"

One respondent also provided additional information on funding to Dalhousie researchers. The University holds over $1 million in NSERC funding (p.8, fig. 10) and the Dalhousie Faculty of Medicine accounted for $35 million in research-related funding in 1999/2000 (p. 26). Also, Dalhousie researchers submitted 95% of NSHRF proposals in 2000.

Many respondents gave details of additional research activities not captured in the discussion paper, thus, helping to piece together a more complete picture of the scope of health research in the province. For example, a wide range of community-based, behavioural, multi-disciplinary and collaborative research initiatives was described in Cape Breton.

Composition of key informant group

Many respondents felt that the picture painted of the health-research landscape, as well as the scope of some of the other health-related research being carried out in the province, was limited partly due to the composition of the key informant group interviewed for the report. They felt that:

- the group was limited to "senior academics" and the key informants' disciplines were not identified

- there was no obvious representation from allied health disciplines, "new researchers", smaller universities, nurse researchers, child health experts, health policy-makers or senior decision-makers.

- there was little representation from outside the Halifax area

4.2.2 **Research-related issues**

Role of NSHRF

One respondent saw the role of NSHRF as that of a facilitator and not a "driver" in achieving a strategic plan for health research in the province. Another respondent urged NSHRF to decide exactly what its central mission should be. Should its focus be "to equip the health-research community to exploit federal and national sources of research funding" or "should its focus be to ensure that the activities of Nova Scotia researchers orient more towards the priorities and concerns of Nova Scotians"? Adopting the former would obviously lead to completely different strategies than embracing the latter.

Definition of research

A number of people specifically supported the broader definition of research adopted by NSHRF, particularly the recognition of health as distinct from disease. Others suggested the addition of environmental, social, population and nursing research to the list of research categories.

Quality of Research

Virtually all respondents used the words "quality" and "excellence" in reference to health research, emphasizing that research excellence must be the highest priority for NSHRF. Nevertheless, one respondent asked for a clear definition of "quality research" and stressed the need to involve a strong and diverse mix of researchers when developing the criteria for quality research, especially for emerging methodologies e.g. feminist critical theory, participatory action research. Another respondent also urged that "allowances be made for competing paradigmatic definitions of what constitutes quality".

Focus of research

A healthy debate centred on the suggested focus for NSHRF support, with virtually all respondents advocating for more support and resources for their own jurisdictions. Although *A Critical Look* explicitly stated that a province the size of Nova Scotia could not do everything and needed to build on existing strengths, some respondents still felt that it could still be interpreted to encourage the development of approaches supporting research where there was little or no chance of building critical mass.

One respondent asked how an intention to "fund only the highest-quality research" could be compatible with building capacity for research, pointing out that, particularly in a small province, developing research in new and emerging areas and broadening research areas was not always advisable if it came at the expense of research depth. While targeting a competition to a specific area where the capacity was absent may encourage some to enter that field, applicants are unlikely to be successful at national competitions without the requisite bench-strength. Another person urged great caution before "supporting smaller universities in developing their research capacities.... There is no evidence that these universities are striving to achieve a research mandate nor have they the starting capacity to become nationally competitive.... Capacity building must start with genuine potential and not just where capacity is absent".

Another respondent emphasized that the specialty nature of research requires extensive training, mentoring and support. For example, it is not possible simply to take faculty members who have been teaching at a university for many years and expect to turn them into qualified researchers. Although increasing research capacity may be a laudable endeavour, NSHRF was advised to be realistic about how this was done and to concentrate on areas of research strength. Doing so would improve the quality and the international reputation of the province's research and researchers, while increasing capacity through collaboration and the building of health-research networks.

At the same time, however, NSHRF should not ignore new applications from outside areas of strength as each new application could be an opportunity for large returns. Seed or pilot funding is essential for the future production of high-quality research from emerging researchers and research areas, and NSHRF was urged to award grants with a mix based on record, novelty, excellence and promise.

Some respondents advocated offering "discipline-specific" research support outside medical research on the grounds that medical research already attracted other types of funding, and diverting scarce funds from NSHRF to medicine would limit funding opportunities to other disciplines. However, medicine's success in developing strong research programs with the help of federal funding was lauded as a good model to follow in providing other researchers with comparable levels of

support over a sustained period of time. As one respondent said:

> "We must be careful that our goal for excellence does not stifle the developing but less-sophisticated researcher. Perhaps some funding should be directed in a time-limited fashion to these individuals. There are times where limiting funding to only the best makes the skilled better and deprives the less skilled of opportunity."

Health systems in Canada face the challenges posed by an aging population, an increased demand for health services and governments' policy of reducing health care costs. A focus on health promotion and disease prevention, with additional consideration given to determinants such as gender and income and poverty, seemed prudent and timely to some respondents.

One suggestion was for NSHRF to build a population-health network linking the decision-makers and the academic community. The network should then commit to undertake a primary-research initiative each year for the province and prepare the necessary proposals for accessing funding. This would have a number of advantages. First, it would help to build the skill base among researchers and decision-makers. Second, the urban and rural population of Nova Scotia would provide a good setting for research analysis. Third, it would build satellite research expertise outside Metro, given that most of the skill base is resident in Halifax. This would also help to expand the economic potential of research while supporting the development of proposals.

NSHRF was also advised to give priority to research that identified best practices and evidence-based practices for health professionals and policy-makers. A useful context for this would be the "Top 10" health issues identified by the Provincial Health Council (page 30). However, one respondent cautioned that "the extent to which research priorities should be guided by issues of importance to Nova Scotians was a contentious one in the research community". Nevertheless, she strongly supported a focus on these specific health issues and urged that this be given serious consideration in the Foundation's policy-development process.

Economic importance of research

For some, the report did not do full justice to the importance of health research for the economic development of Nova Scotia. Good research was -- and is -- an important contributor to the province's economy with over $35 million in total coming to the Faculty of Medicine at Dalhousie and to the province for health research. This amount has the potential to generate another $75-100 million annually while enabling high-quality research to be conducted and researchers to be able to compete effectively at the national level.

Still, many researchers were urged to establish a business orientation and to develop economic opportunities. One respondent drily observed that, "Researchers are not naturally blessed with entrepreneurship.... They ask great questions, but when they get the answer, they really don't know what to do with it in terms of its implementation into the economic structure of the day." This respondent offered the practical suggestion that the research community be linked at an early developmental stage with students in the business disciplines (e.g. MBA, BEc) to achieve more innovative and productive outcomes.

However, some respondents called for a more careful perspective on the potential of research to increase economic activity. In many disciplines of health research, there is not an immediate product with economic potential. Caution was urged about the interpretation of "economic activity", some forms of which may actually exploit the poor. One respondent also suggested that economic justice -- a value associated with population health -- may be more useful in serving the public interest.

Track records in research

One respondent was particularly pleased that NSHRF acknowledged concern about the heavy ratio of applications from, and awards to, established disciplines and the lack of applications from disciplines and institutions with a less-established research emphasis. This individual also pointed out the downside associated with the federal government's approach of awarding research chairs according to a university's history of previous funding success. This practice puts institutions with weaker, less-established records in a difficult situation, unable to attract the funds they need to recruit good researchers and to improve their research status. NSHRF was commended for its commitment to increased research output by building research capacity, providing mentoring opportunities and assisting with proposal development.

Ethics Committees

One respondent challenged the assumption that ethics committees are unsympathetic to non-medical and qualitative research wondering if the difficulty may actually have rested with the inability of the researchers to meet the particular formatting preferences of each particular review committee. Many proposals presented to ethics committees often require countless revisions before they can proceed. The exception to this appears to be at Dalhousie University, where applicants are obliged to adhere to explicit guidelines.

Duration of research funding

NSHRF was urged to extend the length of time that a line of research could receive funding. One respondent endorsed NSHRF's principle that its funding should have an impact on capacity building and that scientists should be "weaned off" local funding money onto other funds. However, it was pointed out that two years is often too short a time to allow for the establishment of "foundation findings" and the acquisition of the preliminary evidence needed to be successful with national funding agencies. In an ideal world, the duration of the funding would be for four years to gather preliminary evidence.

4.2.3 University-specific challenges

Recruitment of faculty

There was grave concern about the impending retirement of a number of experienced faculty members, particularly in the medical and nursing disciplines. High-quality, well-funded research plays a vital role not only in improving health but in recruiting and retaining high-quality clinicians, caregivers, educators and scientists to the region, particularly in clinical and sub-clinical specialties.

A number of people maintained that Dalhousie University was actually far behind in research support for equipment, start-up funding, critical mass, facilities and qualified personnel. New investment in other provinces was deemed likely to further lure excellent Dal faculty and increase the level of competitiveness nationally. In order to be competitive, Dalhousie must now offer its medical researchers a start-up package of $200,000-$250,000 for the re-location and re-establishment of an ongoing research program. New junior investigators require at least $100,000 in start-up funds. NSHRF was, therefore, seen as a very important component in an attractive recruitment package, particularly by funding start-up grants for pilot and first-step research.

One respondent allowed that there was always the need to make a strong case for additional funding to stabilize and to strengthen existing research activities. However, he urged that this should not be done in such a negative way as to harm the province's research reputation. He felt a number of conclusions might be drawn from the report that could lead to serious misinterpretations about health research in Nova Scotia and might harm the province's ability to recruit researchers and students, further weakening the research base.

This respondent disputed the use of the phrase "hostility between researchers" and use of the word "fragile" in describing the state of medical research in the province

and challenged the statement that the research environment was "less than vibrant". On the contrary, some of the science departments in the Faculty of Medicine – such as Biochemistry and Molecular Biology, Microbiology and Immunology, Pharmacology and Neurosurgery – provide clear examples of excellence, offering graduate-training opportunities that are among the best in the country.

Challenges facing new faculty/researchers and "smaller universities"

Some issues are seen to be unique to small universities where undergraduate learning tends to predominate. A major barrier to research in these universities is the heavy teaching load carried by faculty members. The situation is felt to be particularly difficult for new faculty members trying to establish a research career while carrying out their teaching commitments. Junior researchers, particularly those at the undergraduate level, are very important for the future of research and NSHRF was advised to take this into account when allocating funds.

4.2.4 Faculty of Medicine

Many respondents challenged the assertion that the "only vibrant environment for research" was at the Faculty of Medicine, pointing out that the breadth and diversity of health-related research is much greater than described in the document. For example, within recent months, the Faculty of Health Professions at Dalhousie has attracted $3-$4 million in new CIHR grants and a $2 million chair in Pharmacy has been awarded. A significant amount of other health-related research is also taking place elsewhere in the province. One respondent also questioned the term "non-medical" research, with its underlying implication that "medical" research was the norm, and there was an inherent bias against other types of research.

The Faculty of Medicine's performance and its implied "success" rate were seen as potentially divisive within the research community. Some felt that the "success" of the Faculty of Medicine could be interpreted almost in a negative light when, in fact, fulfilling a research commitment is one of the Faculty of Medicine's central missions. Quite simply, there are more people doing basic health research at Dalhousie than in other universities in Nova Scotia because Dalhousie has a medical faculty. As the most research-intensive institution in the province, Dalhousie University supports substantive graduate student research programs. Many researchers working in the teaching hospitals are also affiliated with Dalhousie and their research responsibilities very often took place within joint clinical and academic jurisdictions.

One hot issue was the *apparent* assumption that success in health research competitions was measured by the total number of dollars per grant. Different types

of research require substantially different amounts of money to carry them out. A basic-science health research-grant, for example, usually requires between $50,000-$60,000 whereas a clinical trial could need millions of dollars. The difference in these amounts of money was not a measure of greater or less value, or quality.

The competition for research funding continues to be tough despite the expanding opportunities at the national level. Often a less-than-successful appearance may have been due more to the high calibre of competition for scarce funds than a reflection of quality. One respondent suggested that a success rate for the purposes of comparison should be based more on the number of successful applications when compared to the total number submitted for consideration. Still another meaningful comparator against which to measure Dalhousie's success is to look at universities outside the province of similar size and structure. Yet another respondent suggested the best indicator is "the number of graduate student awards per full-time faculty equivalent", to help gauge the research learning environment for students.

Some felt that researchers at Dalhousie are actually under-funded when compared to their colleagues in other provinces. One queried the rank of #5 attributed to Dalhousie (in reference to MRC/CIHR grant-funding success) and stated that Dalhousie actually ranked 11th out of 14 universities. Moreover, "if performance was based on "per capita", Dalhousie would ... rank last!"

The document recognized significant successes in the fundamental (biomedical) research sector but, according to one respondent, failed to build on this by exploiting the sector to support more broad-spectrum research approaches. He pointed out that while the biomedical community may be successful, it still remains fragile and in desperate need of achieving both critical mass and sustainable resources. "Real peril confronts all aspects of research including the biomedical model." Too often, it was noted, research capacity is "only one-person deep".

Although the discussion document suggested that Dalhousie was strong in research, a number of respondents believed that the university was relatively weak in some areas compared to other even moderately research-intensive universities across Canada. Many areas within medicine – family medicine was one example – are under-represented in research and suffer from both a lack of skilled investigators and little infrastructure. Referring to the analogy used in *A Closer Look,* one respondent stated that "a substantial part of the 'research elephant' could be facilitated by Family Medicine". This deficit is not only a Canadian problem but a national and international one. However, the United Kingdom, the United States and Australia have recognized the problem and are attempting to correct it. Canada was urged to follow their example.

4.2.5 Partnerships

Research partnerships

Some respondents challenged the statement that "universities have not provided support for inter-sectoral collaboration", and cited specific examples where this had, in fact, occurred. Many felt that it was impossible to overstate the importance of partnerships in research. One university department, for example, explicitly endorses the increased capacity for partnership opportunities as valuable to the growth of research.

These alliances can take many forms: between and among researchers, disciplines, universities, funders, agencies, provinces and the various levels of government; and through collaboration, networks and inter/trans-disciplinary initiatives. However, there are some very real obstacles to establishing partnerships. One respondent cautioned about the pitfalls of forcing partnerships, saying that "too much emphasis on partnerships is creating links without synergy".

Establishing successful partnerships also requires a significant time commitment. One individual cited the province's recent lack of success in securing new research grants despite having been successful in obtaining grant renewals – a situation well documented by the Regional Partnership Program.

A major difficulty in funding health research in Nova Scotia arises not from a lack of ability on the researchers' part but from the difference in provincial funding strategies compared with other provinces. National initiatives such as CFI, CIHR and the Atlantic Innovation Fund requires applicants to find successful funding partners. One respondent stated that there were large amounts of federal dollars sitting unmatched by Nova Scotia even though the science had been approved nationally by rigorous peer and committee review. Matching funding is easier to achieve in other provinces such as Ontario where, if an application is successful with CFI, there is an automatic guarantee of provincial funding for the majority of the required partnership money. By comparison, the number of partners and the matching resources are limited in Nova Scotia. Provincial governments in the Atlantic Provinces also face the special challenges of an insufficient critical mass of human and financial resources allocated to research activities.

Funding is further constrained in relation to charitable organizations such as the Canadian Lung Association and the Canadian Heart Association, which have recently established a national grant-review process. These organizations award funding based on a percentage of provincial revenues. In the case of the first organization, for example, the funding allocation for Nova Scotia is limited to less than $5000 whereas larger provinces have access to between $25,000 and $ 40,000.

Nevertheless, new partnerships should be possible. One opportunity cited was a recent call for proposals launched by CIHR for their Training Program and their Emerging Team Program, both of which focus on capacity building and are congruent with NSHRF's objectives. Within these initiatives, "aging" and "cognitive decline" were specifically identified as priority areas to be supported by the Institute on Health and Aging. Another example at a bureaucratic level is the collaboration between the Nova Scotia Department of Community Services and the Department of Health on "Healthy Child Development",and "Child and Youth Mental Health" programs, with a joint policy focus on well being, quality of life and healthier populations.

Involvement of government and policy makers in research

Opinion was divided over the involvement of government in research. There was clear recognition of the discordance between health research and decision-makers, with few disputing that government policy should be based on research evidence. However, a vigorous debate centred around how policy should be derived, the scope of government's role in research and the appropriate juncture for that involvement.

Some respondents unreservedly supported policy-maker involvement in planning efforts. One person urged that NSHRF facilitate a collaborative planning process that would bring together all the stakeholders including policy-makers, thus, "building capacity from each side with researchers seeing the uptake of their labours and policy partners coming to a true understanding of the evidence on which to base their decision-making". Another respondent advocated for policy to be developed as much from "grass-roots up" as from the more traditional "top-down" approach.

On the other hand, there were a number of practical, ethical and philosophical difficulties inherent in involving policy-makers. One respondent pointed out that the highest level of enthusiasm for the involvement of government was usually associated with policy-makers' "need to know". Moreover, policy-makers frequently change position and have little time for planning research it was stated. Another assertion was that "while it was the responsibility of policy-makers to link policy efforts to research, they don't have to be – and often shouldn't be – involved directly in the research process".

One person cautioned that, while there should be some calls for targeted policy-based research, this should not be the emphasis of the Foundation. Areas where policy-makers might appropriately be involved and where new indicators should be developed could include "breast and cervical screening, wait-times, adherence to guidelines and impacts of preventive health uptake".

Another respondent recognized that the concept of identifying research priorities could be a valuable one for a province with limited resources. However, how those

priorities are arrived at, and by whom, should not be a "boardroom decision.... One can predict that the concept of telling our researchers what research they should do and how they should fit in with a list of priorities selected by those outside the research community will be contentious for many researchers, to say the least".

Concerns were also raised about any implication of close ties between the Nova Scotia Health Research Foundation and the government, with a strong caution to NSHRF about standing at the top of a very slippery slope.

> "History has shown that when governments dictate the type of research that will be done, it can lead to the total subversion of the principles of good research in an effort to provide documentation for government policy decisions....
>
> NSHRF (should) be extremely careful to ensure that, while general areas of health research...of particular interest to the government are encouraged, this will not lead to a limitation in the opportunities for curiosity-driven health research nor to narrowness of options even within the areas to be encouraged."

5. ADVICE FOR NSHRF

Several additional messages came through loud and clear from respondents to the discussion document *A Critical Look* and NSHRF was offered the following advice:

Preparation of documents, discussion papers, etc.

> *Include as wide an audience as possible in the development of discussion documents. This could be done in a number of ways including direct face-to-face interviews, telephone interviews, and by using expert readers to review and comment on draft documents prior to wider circulation. A group of expert readers could review draft reports to ensure accuracy of interpretation.*
>
> *Use audio-taping as appropriate in recording interviews.*

Role clarification

> *Define NSHRF's role, mission and future objectives* clearly.

Definition of research

Spend time building consensus around the Foundation's view of health research.

Research quality and capacity

Use strategic targeting to develop research capacity, similar to the approach adopted by Dalhousie University's Faculty of Medicine.

Support post-doctoral and graduate students.

Provide seed money for pilot research projects that are of high quality to help researchers establish a track record when they apply at the national level.

Provide support programs for the recruitment of high-quality researchers to the region i.e. start-up funding for new researcher similar to that given in Alberta and Ontario.

Add "focussed and group research" as a separate category for funding support.

Ethics Committees

Support the development and use of a guide for researchers (similar to the "Tri-Council Guidelines") in the preparation of proposals for ethics review.

New researchers and smaller universities

Help new university faculty establish their research through financial support.

Conduct focus-group interviews involving faculty members from smaller universities across the province to identify specific issues of concern.

Establish early career awards to provide additional support to researchers with exceptional potential.

Establish mentorship programs and systems to receive feedback (consultations) on proposals in progress.

Provide additional funds for grant development for new and established researchers alike.

Include course relief as an allowable budget item in NSHRF proposals based on need only and reserved for those with higher teaching loads.

Add a new level of personnel grants for undergraduate honours students, with logistics and an application process similar to masters' and doctoral students. Second- and third-year undergraduate students should be eligible.

Establish a database with information on individuals pursuing health research along with their areas of interest/expertise to assist in identifying researchers with similar interests and in identifying partnerships.

Allocate special funds and/or competitions to assist in establishing partnerships in areas deemed necessary by the Foundation or by researchers.

Partnerships

Explore opportunities to foster partnerships and to generate federal funding, thus maximizing the effect of limited provincial dollars.

Pursue opportunities for partnerships between Atlantic provinces including peer reviews, training, and mentoring of researchers.

Connect researchers on specific projects to build expertise and to enhance multi-disciplinary approaches.

Strengthen the communication and dissemination of research.

Provide writing workshops.

Connect researchers and decision-makers.

Develop, support and encourage the Atlantic Provinces to work together in developing research capacity and overcoming challenges to compete on the national scene for research funding and to attract high-quality researchers.

Offer a workshop where examples of partnership building can be analyzed and the lessons shared with the wider group.

Involvement of Policy-makers and government

Define the scope of, and the appropriate juncture for, government's and policy-makers' role and involvement in research activities.

Ensure that government and its representatives are clearly kept at arms' length from NSHRF to guard against any inappropriate influence in determining the research agenda while still maximizing uptake of research findings.

6. CONCLUSION

The Nova Scotia Health Research Foundation is committed to advancing health research in the province and to serving its constituency over the long term. The Foundation's philosophy is captured most succinctly by the respondent who advised that:

> NSHRF has the potential to be the force that could bring Nova Scotia stakeholders together to make the most of the current opportunities in health research. We would side with those who argue that the most effective approach would be a process aimed at creating dialogue and collaboration among the full range of research stakeholders. The success of an approach based on focussing efforts and resources on building expertise in certain priority areas hinges on how, and by whom, decisions about the appropriate priorities and about what constitutes "expertise" are made.

NSHRF is deeply grateful to those individuals and organizations who shared their thoughtful and insightful analyses of the current state of health research in Nova Scotia in such a frank and open manner. Given the wealth of information provided by the respondents to the discussion paper, the health-research picture is now even broader than that captured by *A Critical Look at Health Research in Nova Scotia".*

All the responses included helpful and insightful suggestions both for strengthening Nova Scotia's health-research community and for developing NSHRF's role within that community. For obvious reasons, this report does not include full details of every response to the discussion document. However, the complete text of each response will be reviewed and analyzed in detail by the Board of NSHRF as the Foundation develops its policy direction and charts its future course.